

REMARKS

The Office Action of July 14, 2006 was received and carefully reviewed. The Examiner is thanked for reviewing this application.

Claims 1-28 are pending for consideration, of which claims 1-6 and 10-15 are independent. By this Amendment, claims 1-6, 12-18, 20-21, 23-24 and 27-28 have been amended and claims 8-9 and 22 have been canceled.

In the detailed Office Action, the specification stands objected to as the title of the invention is deemed as non-descriptive. In response, Applicants have amended the title as suggested by the Examiner.

Further, claims 12 and 13 stand objected to because line 2, after “glass”, “substrates” should be singular --substrate--. In response, Applicants respectfully assert that the claims submitted in the Preliminary Amendment filed November 30, 2004 do not contain the errors alleged by the Examiner.

Furthermore, claim 26 stands objected to as being a substantial duplicate of claim 16. In response, Applicants have amended claim 16 to change its dependency from claim 1 to claim 13, as shown above.

Claims 17-18, 20-24 and 27-28 stand rejected under 35 U.S.C. §112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner is unclear what “the droplet” comprises. In response, Applicants have amended claims 17-18, 20-21, 23-24 and 27-28, as shown above, to further clarify the claim language.

Claims 8 and 9 stand rejected under 35 U.S.C. 102(b) as being anticipated by Miyakawa (U.S. Patent No. 6,051,150 – hereafter Miyakawa). Further, claims 1, 3-4, 6-13, 16, 18-19 and 21-26 stand rejected under 35 U.S.C. §102(e) as being anticipated by Yamazaki et al. (U.S. Patent Application Publication No. 2005/0011752 A1 – hereafter Yamazaki ’752). Still further, claims 1-7, 14-15, 17-21 and 27-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ishikawa (U.S. Patent No. 5,429,994 – hereafter Ishikawa) in view of Ogawa (U.S. Patent No. 6,871,943 – hereafter Ogawa) and Koinuma et al. (U.S. Patent No. 5,549,780 – hereafter Koinuma). Still further, claims 10-11 and 23-24 under 35 U.S.C. 103(a) as being unpatentable over Matsushita (JP 10062814 A – hereafter Matsushita) in view of Ogawa. Finally, claims 12-13 and 25-26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa in view

of Matsushita and Ogawa. In response to these rejections, Applicants respectfully traverse at least for the reason provided below.

With respect to the anticipatory rejection of claims 8 and 9, Applicants have canceled these claims, as shown above, without prejudice or disclaimer to the subject matter disclosed therein.

With respect to the anticipatory rejection of claims 1, 3-4, 6-13, 16, 18-19 and 21-26, Applicants are in the process of preparing a verified English translation of the priority documents JP 2003-028927 and JP 2003-028931, which were filed on February 5, 2003 and pre-dates the filing date of February 3, 2004 of Yamazaki '752. Applicants will provide a copy of the English translation, as soon as it is completed.

With respect to the obviousness rejection of claims 1-7, 14-15, 17-21 and 27-28 Ishikawa, Ogawa and Koinuma, Applicants respectfully traverse the rejection at least for the following reasons:

In the obviousness rejection, the Examiner asserted that Ishikawa discloses in Figs. 5(a)-6(f) a manufacturing method of a display device comprising: forming a resist pattern 3 by use of droplet emitting means 222b (see also Fig. 8(b)). However, Ishikawa discloses forming the resist pattern by use of a spin coater which spreads a liquid resist 3b over the entire surface of a metal film 2a, as shown in Col. 1, lines 27-34 and Fig. 8. This is different from the droplet emitting means in the presently claimed invention in view of that droplets are selectively formed to create resist and/or wiring, as recited in the amended claims 1-6 and 14-15.

With respect to Ogawa, the reference discloses selectively formation of resist and/or wiring Col. 31, lines 18-32 and lines 43-53 though the Examiner does not point out that.

With respect to Koinuma, the reference discloses an atmospheric plasma processing means. However, it appears that Koinuma does not teach or suggest that the atmospheric plasma processing means is used for etching wiring or ashing resist or formation of a display device. Hence, Applicants respectfully assert that there is no motivation or suggestion to apply the Koinuma's atmospheric plasma processing means with Ogawa's manufacturing method.

With respect to the obviousness rejection of claims 10-11 and 23-24 over Matsushita in view of Ogawa, the Examiner asserted that Matsushita discloses in Fig. 1 a

manufacturing method of a display device comprising: forming groove 12 in an insulating film 5 formed on a glass substrate; emitting a composition 10 in the groove; and forming a pattern 10a comprising the composition along the groove, for use as a wiring. However, Applicants respectfully assert that Matsushita discloses the groove 12 is formed in a region crossing a panel cracking line x, as shown in Fig. 1, which is a cross section of B-B' in Fig. 2 and paragraphs [0016]-[0017] but does not disclose groove 12 along the wiring 10(10a) as shown in Fig. 3 which is a cross section of A-A' in Fig. 2.

Moreover, Matsushita also discloses an effect of the groove 12 that according to the wiring 10a attached firmly to a substrate 1 in the groove 12, the wiring is prevented from peeling off when conducting panel is cracking along line x. Applicants are also in the process of preparing an English translation of Matsushita and will submit the same to the Examiner in an IDS, as soon as it is completed.

On the other hand, it appears that Ogawa does not teach, disclose or suggest emitting a composition in the groove by the droplet emitting means to form the wiring because Ogawa teaches that a metal material in the liquid form is selectively ejected from a head unit in Col. 31, lines 18-32. Hence, Applicants respectfully assert that the claimed invention cannot be derived from a combination of Matsushita and Ogawa, and that combination of Matsushita and Ogawa in the obviousness rejection is improper.

With respect to the rejection of claims 12-13 and 25-26 over Ishikawa in view of Matsushita and Ogawa, the Examiner asserted that Ishikawa discloses a first thin film 2a, a pattern 3 comprising composition and a second thin film 13, that Matsushita teaches a liquid crystal display device comprising a glass substrate, and that Ogawa teaches to use a droplet emitting head to form a metal wiring on devices such as a liquid crystal display device. In response, in order to overcome the rejection, Applicants have amended claims 12 and 13, as shown above, to add a limitation of "the pattern improves adhesion between the first thin film and the second thin film". A support of the amendment is in Implementation Mode 5.

Applicants respectfully assert that Ishikawa does not teach the pattern (resist mask 3) improving adhesion between the first thin film (metal film 2a) and the second thin film (developing solution 13) or Ogawa does not teach the metal wiring improving

adhesion between layers sandwiching the metal wiring. Also, Matsushita does not teach the wiring improving adhesion between layers sandwiching the wiring.

The requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP §2143 - 2143.03 (pages 2100-122 - 2100-136), are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and, finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. As the cited prior art references are deficient, as discussed above, their application, separately or in combination, in the obviousness rejections is improper.

In view of the foregoing amendments and arguments, it is respectfully requested that the rejections of record be reconsidered and withdrawn by the Examiner, that claims 1-7 and 11-28 be allowed and that the application be passed to issue. If a conference would expedite prosecution of the instant application, the Examiner is hereby invited to telephone the undersigned to arrange such a conference.

Respectfully submitted,



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